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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/433,389	11/03/1999	KOJI OGUMA	51441-016	2492

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EXAMINER	
NELSON, ALECIA DIANE	
ART UNIT	PAPER NUMBER
2675	8

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 09/433,389	Applicant(s) Oguma
Examiner Alecia Nelson	Art Unit 2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on Nov 3, 1999.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) Claim(s) 2-7 is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 2-7 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are objected to by the Examiner.

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) All b) Some* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) Notice of References Cited (PTO-892)

16) Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) Information Disclosure Statement(s) (PTO-1449) Paper No(s). 6

18) Interview Summary (PTO-413) Paper No(s). _____

19) Notice of Informal Patent Application (PTO-152)

20) Other: _____

DETAILED ACTION

Drawings

1. Figures 2 and 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 2-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Endoh et al. (U.S. Patent No. 5,218,352).

With reference to the claims, Endoh et al. teaches a liquid crystal display circuit comprising a bias producing means (3) for producing 1/3 bias. The voltage VDD supplied from power switching means (8) is divided by resistors (R1, R2, R3, and R') to provide output voltages (VLC0, VLC1, VLC2) which are used as bias voltages for display driving means (2). Endoh et al. fails to specifically teach an the layout of the LCD display as claimed however, as claimed, is an inherent structure of a segmented display.

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Endoh et al. fails to specifically teach the usage of a controller including dormancy determining means for selecting within a single frame a period at least one predetermined period for which the voltage between all common and segment terminals is zero or close to zero. However, there is taught a bias changing means (9), which is connected with bias producing means (3), that serves to change the resistance of a resistor (R') for producing the bias voltage VLC2. The changing means (9) changes VLC2 in accordance with the power supply changing command signal A thereby to reduce the contrast to some degree, otherwise, the contrast may become too high (see column 7, lines 30-40). By increasing the resistance of resistor (R') , the LCD driving voltage becomes smaller (see column 7, lines 52-56). Also it can be seen with reference to Fig. 4, a dormant period for which the voltage between all common and segment terminals is close to zero in a single frame period.

Therefore it would have been obvious for the voltage between all common and segment terminals to be zero, as suggested by Endoh et al. to thereby provide a liquid crystal display circuit for use in an apparatus to thereby provide improved density adjustment which prevents the user from receiving an unusual impression of the display by suppressing a change in the contrast thereof.

Conclusion

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4. Any response to this action should be mailed to: Commissioner of Patents and Trademarks Washington, D.C. 20231; or faxed to (703)309-9051, (for formal communications intended for entry) or: (703)308-6606 (for informal or draft communications, please label "PROPOSED or DRAFT). Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive Arlington, VA., Sixth floor (Receptionist).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alecia D. Nelson whose telephone number is (703)305-0143.

If attempts to reach the above examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached at (703)305-9720.

and/AND
June 13, 2002



DENNIS-DOON CHOW
PRIMARY EXAMINER